

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)


REC'D 19 JUL 2001

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Applicant's or agent's file reference 2341181	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).	
International Application No. PCT/AU00/01187	International Filing Date (day/month/year) 28 September 2000	Priority Date (day/month/year) 29 September 1999
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ H01M 8/10, 4/66		
Applicant CERAMIC FUEL CELLS LIMITED et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.																								
2.	<p>This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheet(s).</p>																								
3.	<p>This report contains indications relating to the following items:</p> <table border="0"> <tr> <td>I</td> <td><input checked="" type="checkbox"/></td> <td>Basis of the report</td> </tr> <tr> <td>II</td> <td><input type="checkbox"/></td> <td>Priority</td> </tr> <tr> <td>III</td> <td><input type="checkbox"/></td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>IV</td> <td><input checked="" type="checkbox"/></td> <td>Lack of unity of invention</td> </tr> <tr> <td>V</td> <td><input checked="" type="checkbox"/></td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>VI</td> <td><input type="checkbox"/></td> <td>Certain documents cited</td> </tr> <tr> <td>VII</td> <td><input type="checkbox"/></td> <td>Certain defects in the international application</td> </tr> <tr> <td>VIII</td> <td><input type="checkbox"/></td> <td>Certain observations on the international application</td> </tr> </table>	I	<input checked="" type="checkbox"/>	Basis of the report	II	<input type="checkbox"/>	Priority	III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input checked="" type="checkbox"/>	Lack of unity of invention	V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input type="checkbox"/>	Certain observations on the international application
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Date of submission of the demand 23 April 2001	Date of completion of the report 10 July 2001
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  DAVID K. BELL Telephone No. (02) 6283 2309

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
 pages , as amended (together with any statement) under Article 19,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the sequence listing part of the description:
 pages , as originally filed
 pages , filed with the demand
 pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

1. Claims 1 to 32 relate to a tubular fuel cell assembly having a tubular metallic structure formed of nickel or nickel alloy that is at least partially embedded in the anode layer

2. Claims 33 to 50 relate to a tubular fuel cell assembly having a cathode layer that is discontinuous along the length of the assembly to provide a plurality of longitudinally spaced cathode portions.

There is no common novel element or inventive concept to linking these separate inventions into a unified whole. The two groups of claims appear to be linked merely by the fact that each group of claims concerns a tubular fuel cell assembly.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1 to 32	YES
	Claims 33 to 57	NO
Inventive step (IS)	Claims 1 to 32	YES
	Claims 33 to 57	NO
Industrial applicability (IA)	Claims 1 to 57	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

D1 = EP 0055016

D2 = EP 0442742

The invention as defined in claims 1 to 32 is directed to a tubular fuel cell assembly in which the anode side current collector consists of a tubular metallic structure which is adapted to permit fuel gas in the passage to contact the anode layer, at least the surface of the tubular metallic structure being formed of Nickel (Ni) or Nickel alloy, and wherein the tubular metallic structure is at least partly embedded in the anode layer.

Neither of the cited documents D1 and D2, either singly nor in obvious combination, disclose or fairly suggest a tubular fuel cell having a metallic structure with at least the surface being formed of Nickel (Ni) or Nickel alloy that is at least partly embedded in the anode layer. The invention as claimed in claims 1 to 32 is therefore Novel and has an Inventive Step.

The invention as defined in claims 33 to 57 is directed to a tubular fuel cell assembly where the cathode layer is discontinuous along the length of the assembly to provide a plurality of longitudinally spaced cathode portions. There is no requirement in these claims that the tubular fuel cell assembly must have the nickel (or Nickel alloy) tubular metallic structure of claims 1 to 32. Therefore these claims must be anticipated by any tubular fuel cell that is discontinuous along the length of the assembly to provide a plurality of longitudinally spaced cathode portions. Both the cited documents D1 and D2 disclose such a tubular fuel cell, therefore the presently claimed invention is not Novel and does not involve an Inventive Step when compared to the disclosure of the cited documents.

The claimed invention is Industrially Applicable.